

NASA's challenging missions provide unique opportunities for engaging and educating America's youth, the next generation of explorers. Led by Chief Education Officer Dr. Adena Williams Loston, the Agency coordinates education programs for students, faculty, and institutions in order to help inspire and motivate the scientists and engineers of the future.

On the first anniversary of the [NASA Explorer Schools program](#), NASA announced the selection of 50 new schools across the Nation that will share in studying the exciting world of math and science through the program. Each year, the program partners 50 school teams with NASA for a 3-year period to participate in real-life experiences that inspire students' imaginations. The goal is to spark their interest in pursuing careers in math, science, technology, and engineering.

The program, which was launched in June 2003, sends science and mathematics teachers "back to school" at NASA centers during the summer to acquire new resources and technology tools. Sponsored in collaboration with the National Science Teachers Association, the program uses NASA's unique content, experts, and resources to make learning science, mathematics, and technology more appealing to students. During the commitment period, NASA education specialists and scientists provide investigation opportunities and professional development for the teams of teachers. After the summer training ends, the teachers take the new material and translate it into subjects that will motivate their students.

In April 2004, several Explorer Schools participated in NASA's Reduced Gravity Student Flight Opportunities program. Teams of teachers and administrators from Nebraska, Minnesota, and Iowa flew aboard NASA's KC-135A aircraft. Known as the "weightless wonder," the KC-135A is a flying science laboratory that alternates steep climbs and dives, giving riders the best opportunity to experience weightlessness on Earth.



Teachers from several Explorer Schools conducted microgravity experiments aboard the KC-135A aircraft, a flying science laboratory that gives riders the best opportunity to experience weightlessness on Earth.

Students and teachers from the NASA Explorer Schools worked in collaboration with NASA scientist-mentors to develop microgravity experiments. Two teachers from each school conducted the experiments during flights aboard the KC-135A aircraft. The flights took place from Ellington Field in Houston, Texas, near NASA's Johnson Space Center.

In 2004, three teachers were selected to embark on a new education mission through NASA's Educator Astronaut program. Mission Specialist-Educators Joe Acaba, Ricky Arnold, and Dottie Metcalf-Lindenburger were introduced in May as members of the 2004 Astronaut Candidate Class. These educators are now full-fledged astronaut candidates who will help ensure a new generation is ready for the challenges of exploration.

When NASA opened the door to professional educators to apply for the astronaut corps in January 2003, teachers from elementary, middle, and high schools filed their applications with hopes of making the team. Acaba, Arnold, and Metcalf-Lindenburger will represent those educators as they train for and perform their duties as astronauts.

With the knowledge gained from this program, the three educator astronauts will inspire students to consider careers in math, science, technology, and engineering.

In another effort designed to address the national need for a new generation skilled in these disciplines, NASA recently created the Corporate Recruitment Initiative (CRI) to attract and maintain a work force capturing the full potential of U.S. diversity. In September 2003, the Agency began hosting a series of events called NASA Awareness Days on college and university campuses. NASA has a 5-year plan for the CRI and an integrated, Agency-wide approach to human capital management that is coordinated by the Offices of Education, Human Resources, and Equal Opportunity programs. The goal of the initiative is to attract a diverse workforce with the technical competencies needed to accomplish NASA's challenging missions.

NASA expects the CRI will strengthen the Agency's college recruitment program by increasing students' awareness of and interest in NASA education and employment opportunities. The CRI will partner with professional

and educational organizations for minority, women, and individuals with disabilities in order to enhance interest and participation in NASA career opportunities. By the late fall of 2004, teams of NASA representatives, including NASA Administrator Sean O'Keefe, Deputy Administrator Frederick D. Gregory, and Associate Deputy Administrator for Institutions and Asset Management James Jennings, will have met with students from approximately 40 institutions.

In November 2003, NASA introduced an unprecedented traveling educational space exhibition designed to inspire young people and raise public awareness about space exploration. "SPACE: A Journey to Our Future" was created in collaboration between NASA and the National Science Teachers Association. The sights and sounds of

space exploration envelop visitors through live performances, interactive displays, state-of-the-art projection, and audio technology. The exhibition will travel to museums and science centers in several U.S. cities over the next 5 years.

Back in the classroom, NASA expanded [NASAexplores](#), a Web-based education program that features express lessons and online resources for teachers and students. The Web site includes articles about research conducted in microgravity, the low-gravity environment on spacecraft such as the International Space Station and the Space Shuttle. Biology and physics space research material, provided by NASA's Office of Biological and Physical Research, add to articles and lessons about aeronautics, exploration systems, and space flight. The site has attracted users in more than

100 countries with more than 1.5 million hits monthly over the past 2 years.

New space research topics planned for the site include gravity and space environmental impacts on life; research opportunities that expand understanding of the laws of gravity and enrich life on Earth; issues around human survival in space; technologies to enable the next generation of explorers to explore space; and strategies for inspiring the next generation to take up the challenges of exploration.

"The new NASAexplores content will give K through 12 teachers and students access to materials that focus on all aspects of microgravity, from its physiological effects on the human body to its physical effects on materials and biological samples exposed to the space environment," says Jim Pruitt, manager of education programs at Marshall Space Flight Center. Pruitt is responsible for the creation and management of NASAexplores.

Each NASAexplores lesson is presented in four versions: elementary, middle, high school, and teachers' editions. Each grade-level article features two lesson plans for students, teacher sheets, and a glossary. Weekly e-mail notices, with abstracts of articles and brief descriptions of the latest lesson plans and activities, are sent to subscribers. The site is updated each Thursday with new material, including news and details about national education conferences and other events of interest to the education community.

"Educators have one of the world's most important jobs, educating the next generation," says Pruitt. "NASA's mission statement dedicates the Agency to inspiring the next generation of explorers, and we believe that partnering with teachers is vital to this goal."

The exhibition, "SPACE: A Journey to Our Future," is traveling throughout the United States as an educational tool to inspire young people and raise public awareness about space exploration.

